



Developments in the Natural Gas and Oil Markets

Market Intelligence Branch
Division of Market Oversight
April 17, 2019

Report on LNG Developments and Market Impacts

- **Staff compiled public source evaluations of LNG's impact on the global marketplace**
- **Intention was to assess the fundamental factors driving changes in LNG markets and subsequently, NG derivatives**



Conclusions

- **U.S. LNG exports have most rapid growth rate, price advantage in a growing global marketplace**
 - U.S. export capacity expected to double in 2019
 - EIA forecasts exports to top 14 Bcf/d by 2020, 28 Bcf/d by 2050
- **LNG export growth may put upward pressure on domestic natural gas prices**
 - Estimates of impact have been trending downward
- **Changes in LNG markets may drive increased participation in derivatives markets**

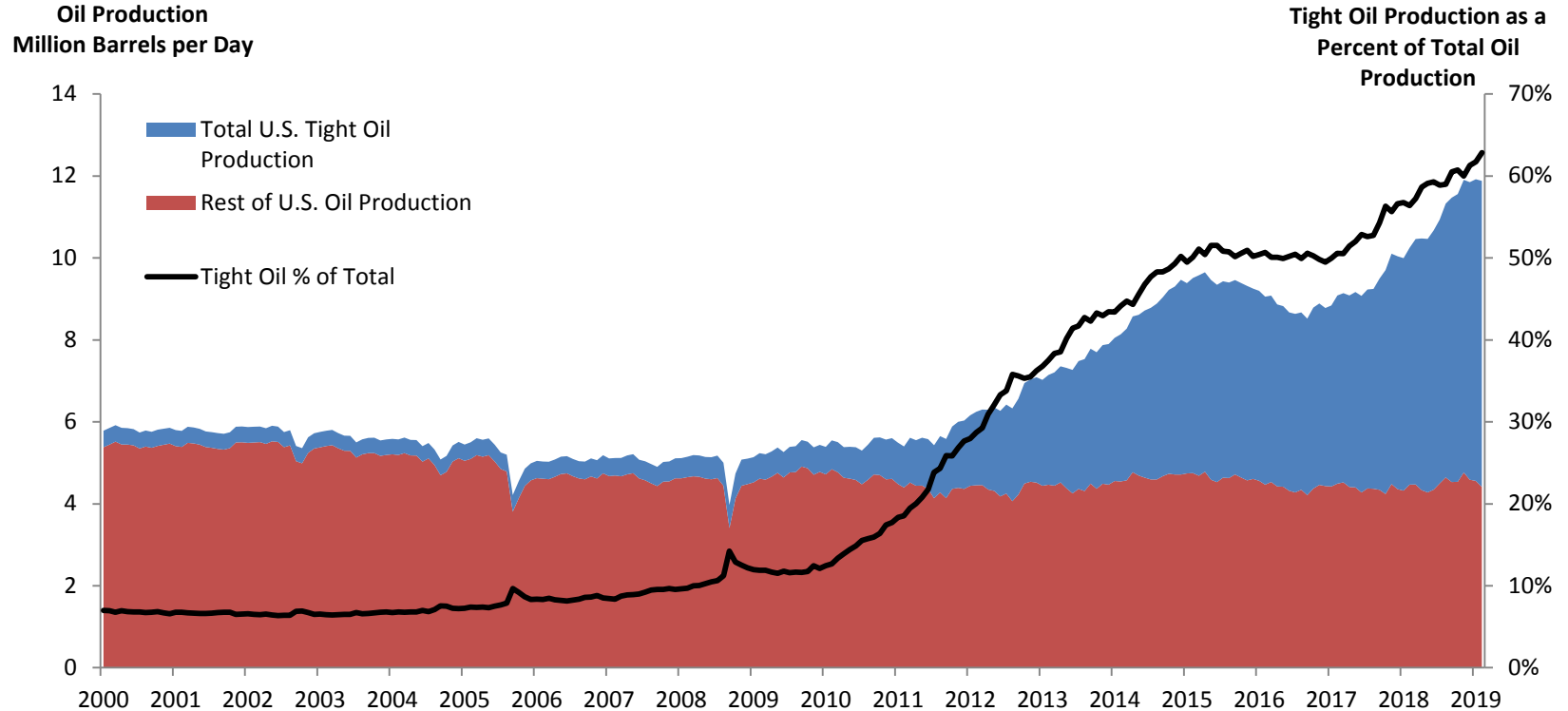


Tight Oil's Impact on NYMEX WTI Futures - Summary

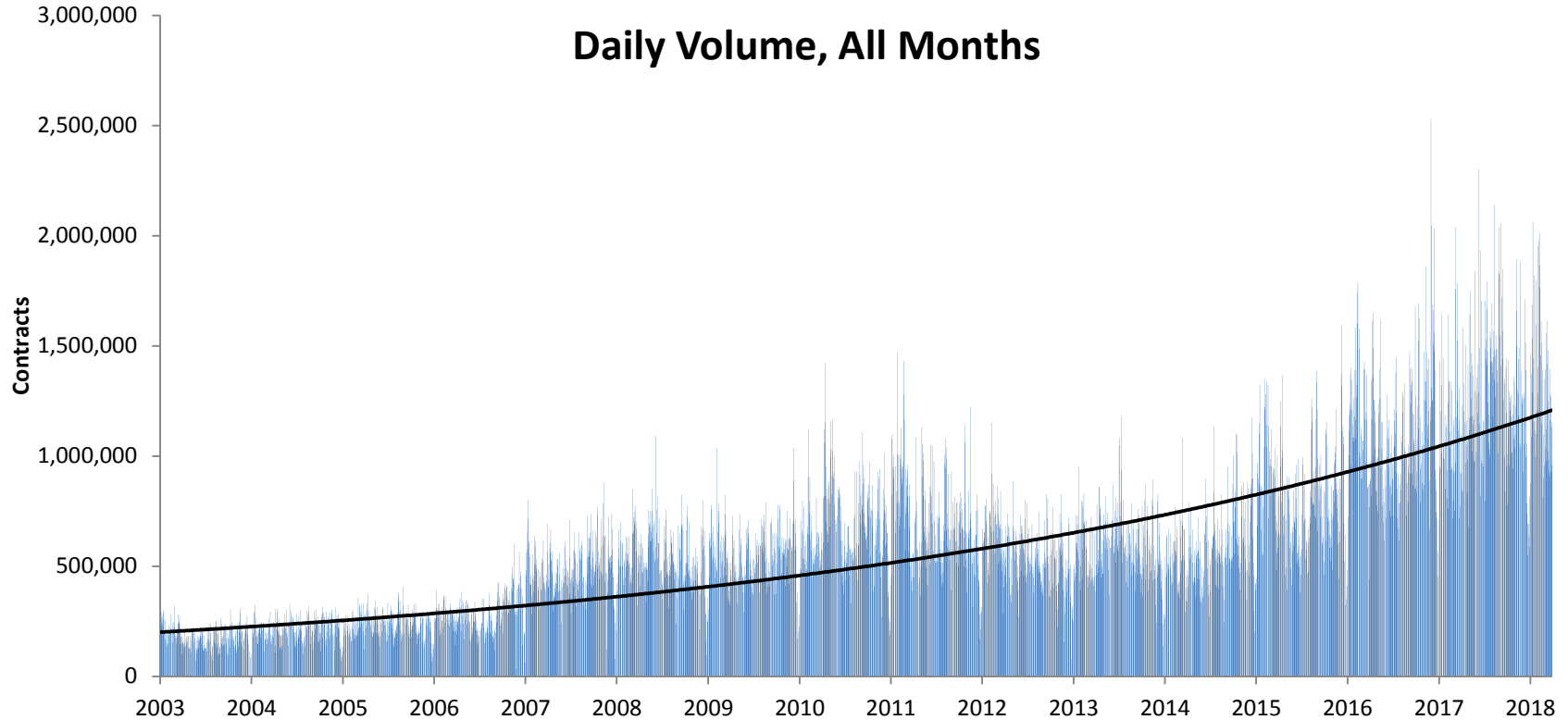
- **Across all expirations, Volume and Open Interest remain robust**
- **NYMEX WTI Open Interest 5+ years out has declined**
- **Confluence of factors**
 - Primarily due to increased production from U.S. shale oil
 - Secondary effects from price levels, regulation
- **Why this matters: Weak long-dated futures liquidity may interfere with WTI's price discovery function over time**



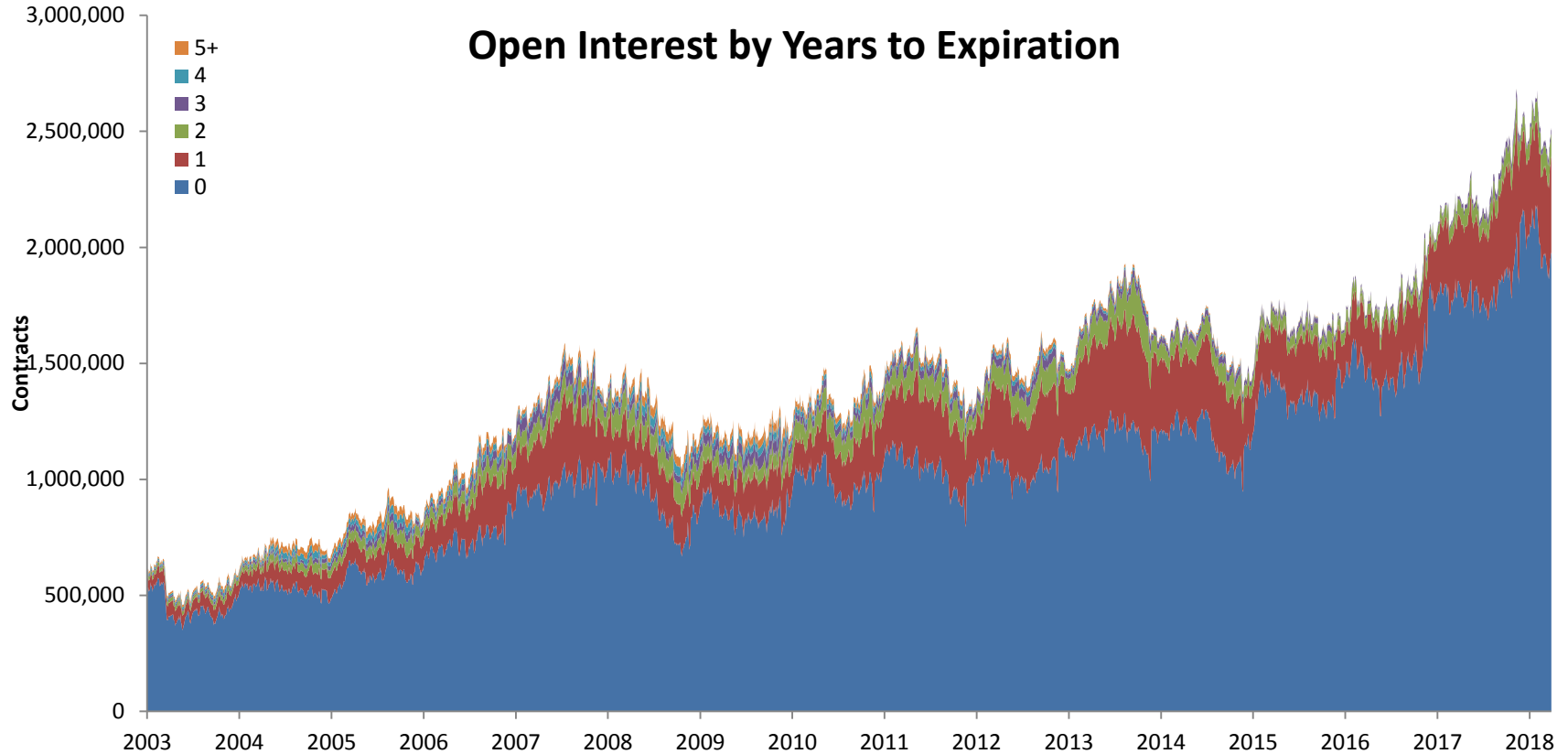
Estimated U.S. Tight Oil Production Accounts for Roughly 63% of Total U.S. Production in Feb. 2019



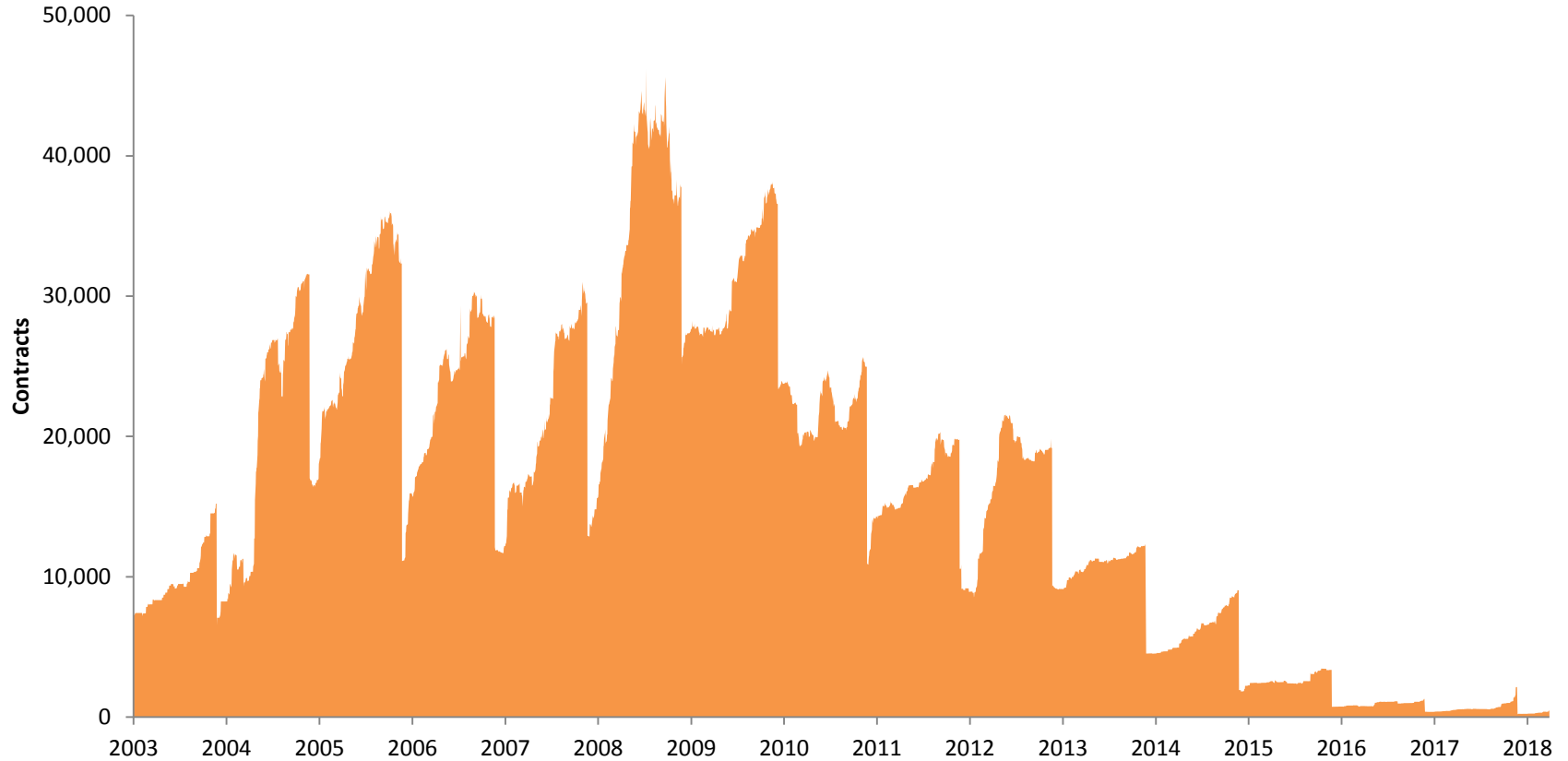
Steady Increase in NYMEX WTI Futures Volume



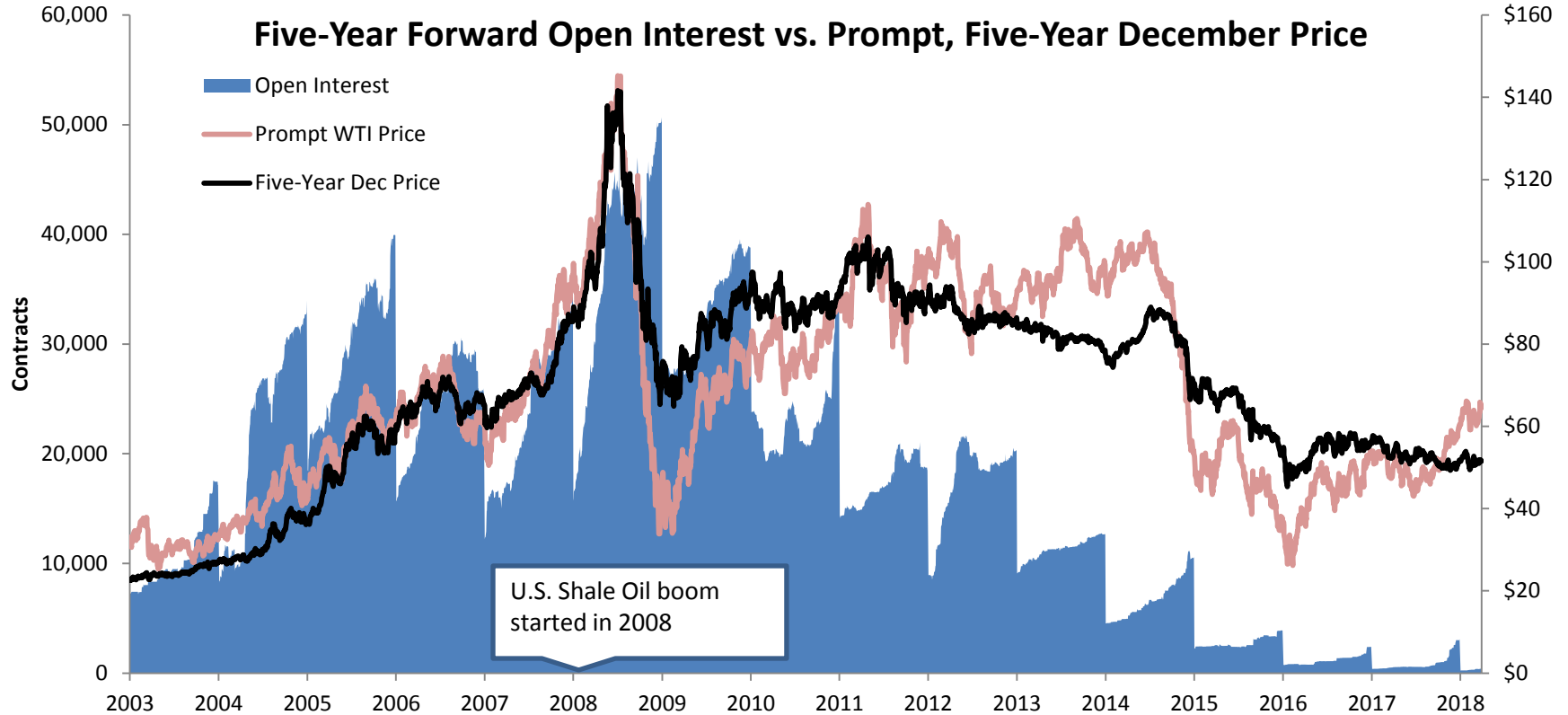
Open Interest also Increasing, but Concentrating



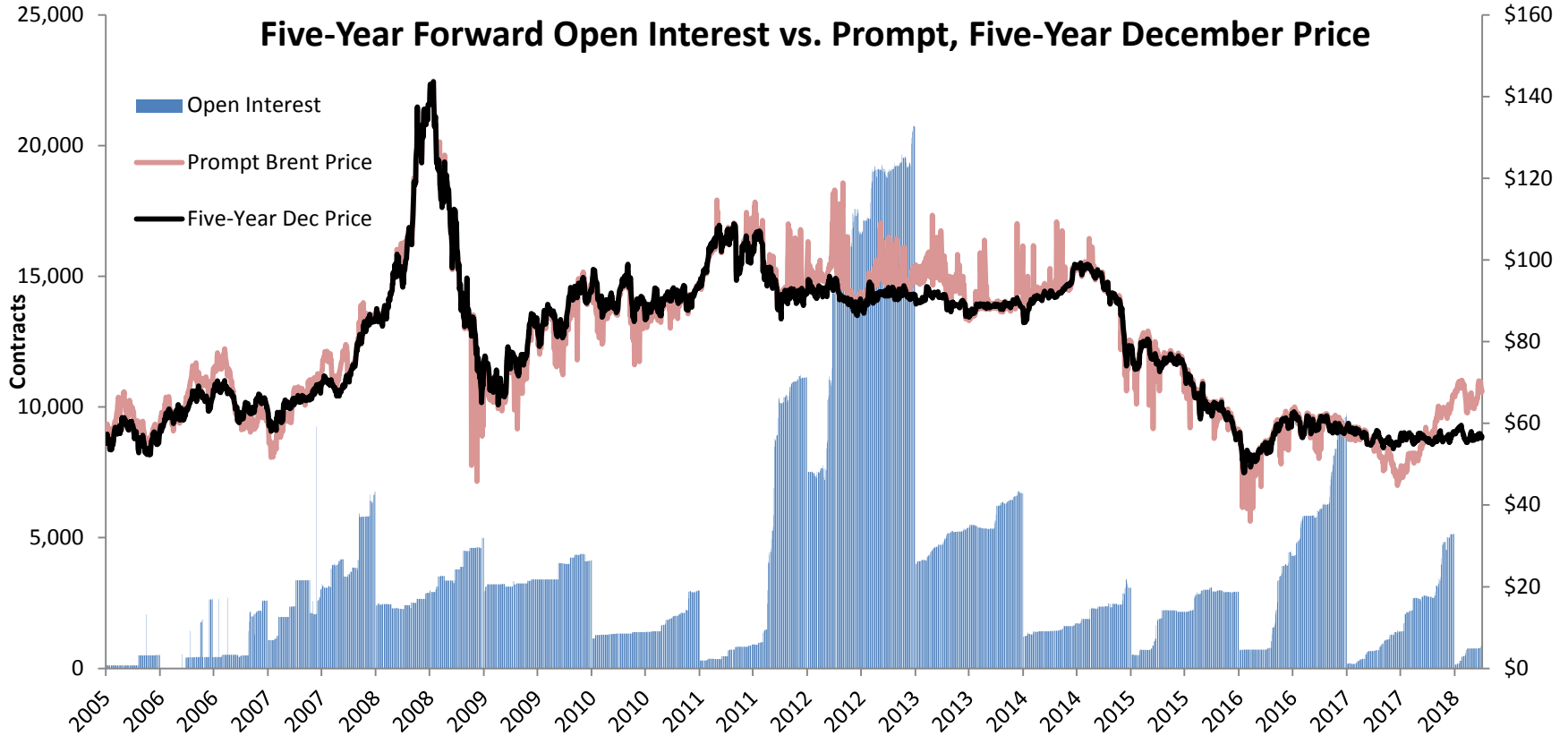
Open Interest Five Years Forward is Drying Up



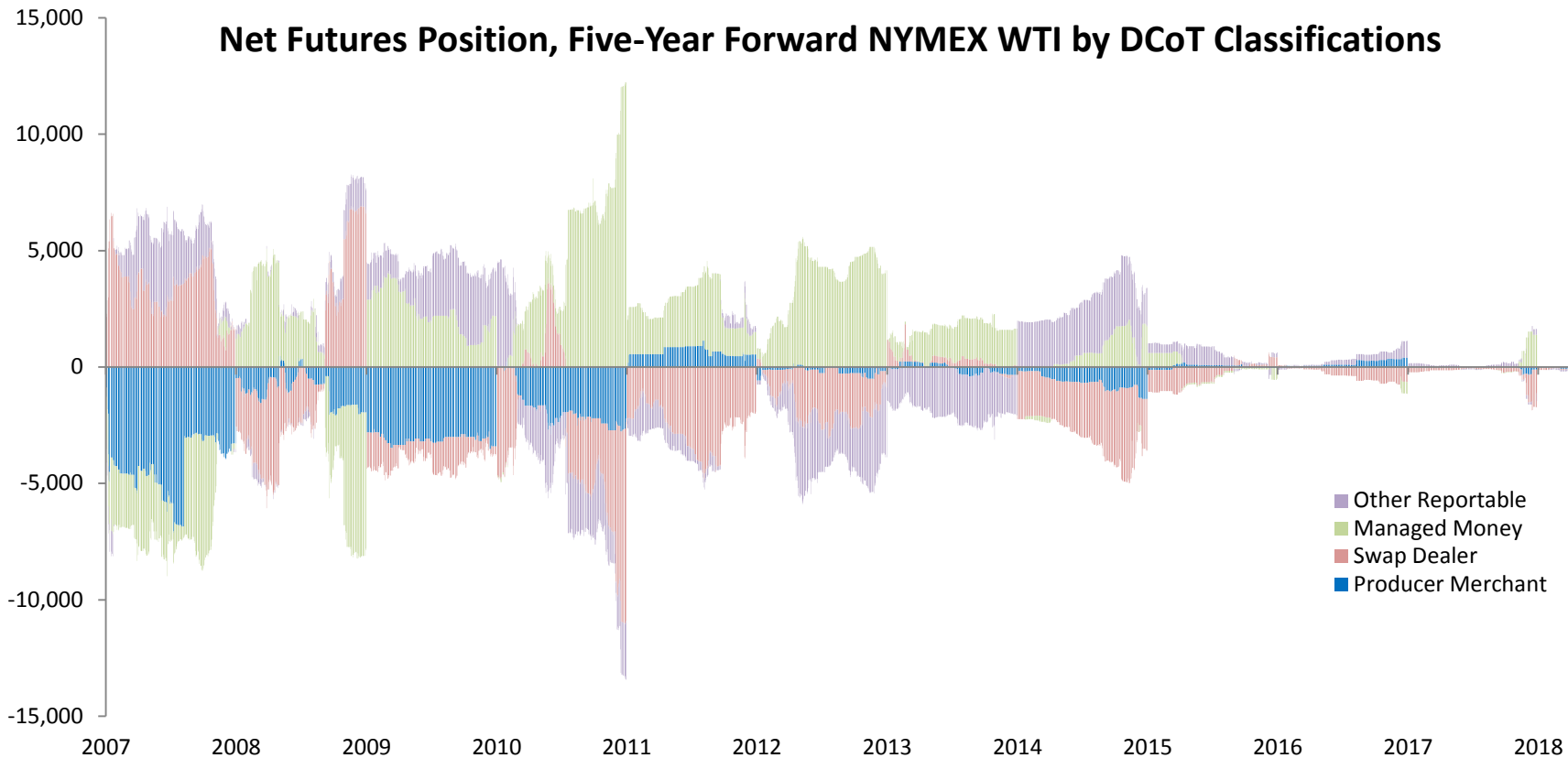
The Decline in Long-Dated OI may be Unrelated to Prices



Long-Dated Brent OI Reflects Historical Trends



While All Market Participants are Still Active, Producers have Largely Exited the Market



Conclusion: Tight Oil's Development Altered Long-Dated Liquidity

- **Short production horizon reduced need for long-dated contracts**
- **Less speculative interest in long end due to abundant oil supply**
- **Long term questions:**
 - Does the lack of long-dated liquidity impair WTI's ability to act as a global benchmark?
 - If there's a resurgence in conventional oil production, how will the derivatives markets respond?



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